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## An Investigation of the Basic Factors of Aesthetic Value in Costume Design

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twenty words as of equal difficulty; therefore, the means for our two tests should be equal. The scale shows a mean of 73% for column Q for 5th graders. Our pupils make a very favorable showing as measured by the first test and a very unfavorable showing as measured by the second test. Dr. Tidyman got similar results, finding means of 70% and 40.5%. Therefore, it might appear that a class will make a favorable or an unfavorable showing in comparison with scale values, depending largely on what words are selected from the scale. Consequently, teachers should be urged not to put too much faith in the norms of the scale, now some 20 years old, when used on an individual class. It was ascertained that of our twenty words, one had been taught in the 3rd year of spelling, 7 in the 4th year, 7 in the 5th year and that 5 have not as yet been taught, being in the 6th year. Therefore, teachers should understand that in selecting words from the Ayres Scale they may get hold of words that their pupils have not as yet studied. It was found that our 5th graders made a very much lower record on such words.

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## AN INVESTIGATION OF THE BASIC FACTORS OF AESTHETIC VALUE IN COSTUME DESIGN

WILHELMINA E. JACOBSON

The general object of this investigation is to determine experimentally the basic factors underlying beauty in costume. The problem has three stages: (1) the determination of what factors of aesthetic value are involved in costume design; (2) which of these factors are basic; and (3) why they are basic.

The material for a preliminary study consisted in paired designs of modern costumes with some element changed followed by introspections from subjects.

A second preliminary study consisted in submitting twenty historic costume designs for observational analysis. From these the factors involved in costume designs and the factors that are basic were determined.

Eleven of these designs were redrawn in ink outlining eliminating color, texture, and expression. These were presented in paired fashion in which some factors such as the aesthetic principles of

proportion, balance, rhythm, and emphasis were varied in order to produce different effects. These were submitted to experts and non-experts by means of the paired comparisons method together with verbal reports. From these data a determination was made as to why certain factors are basic.

STATE UNIVERSITY OF IOWA,  
IOWA CITY, IOWA.

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## ANALYSIS OF INTENSITY IN PIANO PLAYING

D. A. ROTHSCHILD

By means of the Iowa Piano Camera, which gives an objective record of movement of the keys of the piano, and a vacuum tube volt-meter, which measures changes in intensity on the decibel scale, we are able to measure changes in the action, and intensity changes of the piano, that is, we are able to study the relation of the intensity changes of the piano to that of the action.

The first study consists of maximum relative changes in intensity for each key on the piano. The point of maximum intensity when each key is struck with a given force is between the fourth and fifth octave, with the minimum points at each end. There are resonance points, which amplify and retard the intensity of the tone.

In studying the intensity changes due to damping, we find a relation between strength and duration of the intensity after the damping, and (a) its relation to pressure applied to the key (b) relation to length of time pressure applied (c) relation to position of key on the piano and (d) relation of maximum intensity to damped and undamped keys.

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## REMEDIAL MEASURES IN PITCH INTONATION

LAWRENCE E. EBERLY

Attempts of teachers of voice and violin to improve the pitch intonation of their pupils have been exceedingly wasteful of time, due to the tendency of the ear to be either too inaccurate or too easily satisfied in the matter of small differences of pitch. The tonoscope, an instrument now available for use in the music studio, provides an immediate objective visual check on the accuracy of

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